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10/810,475

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Michael W. Frauens

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10/17/2006

PATENT LEGAL STAFF
EASTMAN KODAK COMPANY
343 STATE STREET
ROCHESTER, NY 14650-2201

EXAMINER

LABOMBARD, RUTH NAOMI

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,475

Applicant(s)

FRAUENS ET AL.

Examiner

Ruth N. LaBombard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 31-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 45-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/16/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 31-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/16/06.
2. Applicant's election without traverse of species II in the reply filed on 8/16/06 is acknowledged.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first and second toning shells having a magnetic cores, first and second skive adjacent to a first and second toning shell, plurality of discrete distances between a skive and toning shell, and a toning nap height, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 2 and 50 are objected to because of the following informalities:
 - a. Claim 2: "relative amounts of toner is deposited" should be rewritten with correct grammatical format.
 - b. Claim 50: "one or both toning station is configures" should be changed to read "one or both toning stations is configured"Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-7, 10-13, 19, 20, 23 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Desie et al. (US 6,246,424 B1).
7. With respect to claim 1 Desie et al. disclose "[a] powder deposition device having an increased toning width (column 5, lines 50-60), the powder deposition device

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comprising: a frame support (109) defining a receiver transport path; a first toning applicator comprising a first toning roller (1043), wherein the first toning roller (1043) is positioned with a long axis of the respective toning roller (1043) substantially perpendicular to the receiver transport path (109) and offset a distance (see figure 5), for printing on a first area of a print medium; and a second toning applicator comprising a second toning roller (1045), wherein the second toning roller (1045) is positioned with a long axis of the respective toning roller (1045) substantially perpendicular to the receiver transport path (109) and offset at least the distance (see figure 5), for printing on a second area of the print medium; wherein the first toning applicator (1043) overlaps (see figure 4) with the second toning applicator (1045), thereby allowing both toning applicators (1043, 1045) to print on a same area of the print medium."

8. With respect to claim 2 Desie et al. disclose "a portion of one or both toning applicators (1043, 1045) is configured wherein relative amounts (see figure 5) of toner is deposited by some or all of the toning applicators (1043, 1045) with respect to each other as regulated."

9. With respect to claim 3 Desie et al. disclose "the first and second toning applicators (1043, 1045) are positioned to have a gap (see figure 4), thereby creating one or more areas where the toning applicators (1043, 1045) cannot both print on the print medium." As seen in figure 4, the left side of toning roller 1045 does not overlap with the right side of toning roller 1043.

10. With respect to claim 5 Desie et al. disclose "the first and second toning applicators (1043, 1045) overlap with each other, and wherein the first and second

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toning applicators (1043, 1045) are generally aligned with each other so as to form a first set of toning applicators (1043, 1045), the device further comprising: a third toning applicator (1044) for printing on the print medium; a fourth toning applicator (1041) for printing on the print medium, wherein the third and fourth toning applicators (1044, 1041) overlap with each other, and where the third and fourth toning applicators (1044, 1041) are generally aligned with each other to form a second set of toning applicators (1044, 1041)."

11. With respect to claim 6 Desie et al. disclose "the first and second toning applicators (1043, 1045) are angled (see note 1 below) with respect to a receiver transport path (109) for the device." Note 1: The toning applicators are angled at a 90-degree angle with respect to the receiver transport path.

12. With respect to claim 7 Desie et al. disclose "the third and fourth toning applicators (1044, 1041) are angled (see note 1 above) with respect to the receiver transport path (109) for the device."

13. With respect to claim 10 Desie et al. disclose "the powder deposition device is an electrophotographic printer or an electrographic printer." See column 1, lines 10-15.

14. With respect to claim 11 Desie et al. disclose "[a] printer for wide format toning (column 5, lines 50-60), the printer comprising: a frame support (109) defining a receiver transport path (109); a first toning station (1043) comprising a first toning roller (1043), wherein the first toning roller (1043) is positioned with a long axis of the respective toning roller (1043) substantially perpendicular to the receiver transport path (109) and offset a distance (see figure 5), for printing on a receiver; and a second toning station

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(1045) comprising a second toning roller (1045), wherein the second toning roller (1045) is positioned with a long axis of the respective toning roller (1045) substantially perpendicular to the receiver transport path (109) and offset at least the distance, for printing on the receiver, wherein the first toning station (1043) overlaps with the second toning station (1045; see figure 4) thereby enabling the first and second toning stations (1043, 1045) to print on a same portion of the receiver."

15. With respect to claim 12 Desie et al. disclose "the first and second toning stations (1043, 1045) overlap approximately one to two inches." Desie et al. disclose the rollers overlap 50% of each other (column 9, lines 1-20); this percentage encompasses the claimed one to two inches.

16. With respect to claim 13 Desie et al. disclose "the first toning station (1043) comprises: a first toning shell (1042b) having a magnetic core (1042a) located within the first toning shell (1042b) and extending a width of the first toning shell (1042b); a first skive (124) located adjacent the first toning shell (1042b), wherein the first skive (124) regulates toner deposition onto a substrate, and wherein the first skive (124) is located closer to the first toning shell (1042b) at an end of the first toning shell (1042b) than at a center of the first toning shell (1042b)." See figure 6. Note 2: While Desie et al. do not disclose a specific reference number for the toning shells and magnetic cores of the first and second toning rollers, they do state that the description of the toning shells and magnetic cores of toning rollers 1041 and 1042 are non-limitative (column 9, lines 15+) and thus the components of such rollers describe the structure of the remaining toning rollers as well.

17. With respect to claim 19 Desie et al. disclose "the first toning station (1043) comprises: a first toning shell (1042b; see note 2 above) having a magnetic core (1042a) located within the first toning shell (1042b) and extending a width of the first toning shell (1042b); and a first skive (124) located adjacent the first toning shell (1042b), wherein the first skive (124) regulates toner deposition onto a substrate, and wherein the first skive (124) is positioned to provide decreased toner deposition at a portion of the first toning shell (1042b) overlapping with the second toning station (1045)." Note 3: The skive 124 extends over the length of the toning shell and therefore decreases toner deposition along the length of the shell, including the overlapping section.

18. With respect to claim 20 Desie et al. disclose "the second toning station (1045) comprises: a second toning shell having a magnetic core located within the second toning shell and extending a width of the second toning shell; and a second skive located adjacent the second toning shell, wherein the second skive regulates toner deposition onto a substrate, and wherein the second skive is positioned to provide decreased toner deposition at a portion of the second toning shell overlapping with the first toning station (1043)." See notes 2 and 3 above and figure 5.

19. With respect to claim 23 Desie et al. disclose "[a] printing system for printing wide process widths (column 5, lines 50-60), the system comprising: a frame support (109) defining a receiver transport path (109); a first set of overlapping toning stations (1043, 1045), wherein the first set is positioned substantially perpendicular to the receiver transport path (109) and offset a distance (see figure 5); and a second set of

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overlapping toning stations (1041, 1042, 1044), wherein the second set is positioned substantially perpendicular to the receiver transport path (109) and offset at least the distance (see figure 5), wherein the first and second sets of toning stations deposit toner on a same area of a receiver." See figure 4.

20. With respect to claim 50 Desie et al. disclose "a portion of one or both toning station is configures wherein relative amounts of toner is deposited by some or all of the toning stations (1041, 1042, 1043, 1044, 1045) with respect to each other as regulated." The applied toner is regulated by the skive 124.

21. Claims 1, 4, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Costrop et al. (US 5,848,339).

22. With respect to claim 1 Costrop et al. disclose "[a] powder deposition device having an increased toning width (column 13, lines 25-30), the powder deposition device comprising: a frame support (26) defining a receiver transport path; a first toning applicator comprising a first toning roller (35), wherein the first toning roller (35) is positioned with a long axis of the respective toning roller (35) substantially perpendicular to the receiver transport path (26) and offset a distance (see figure 1), for printing on a first area of a print medium; and a second toning applicator comprising a second toning roller (36), wherein the second toning roller (36) is positioned with a long axis of the respective toning roller (36) substantially perpendicular to the receiver transport path (26) and offset at least the distance (see figure 1), for printing on a second area of the print medium; wherein the first toning applicator (35) overlaps (see figure 1; the

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applicators overlap vertically) with the second toning applicator (36), thereby allowing both toning applicators (35, 36) to print on a same area of the print medium.”

23. With respect to claim 4 Costrop et al. disclose “the first and second toning applicators (35, 36) are positioned so that a point on the print medium passes through at least one toning nip for the first toning applicator (35) and at least one toning nip for the second toning applicator (36). See figure 1.

24. With respect to claim 8 Costrop et al. disclose “a third toning applicator (35’) for printing on the print medium; a fourth toning applicator (36’) for printing on the print medium; wherein the first and second toning applicators (35, 36) print on a first side of the print medium, and wherein the third and fourth toning applicators (35’, 36’) print on a second side of the print medium.” See figure 1.

25. With respect to claim 9 Costrop et al. disclose “the third and fourth toning applicators (35’, 36’) overlap (see figure 1; the applicators overlap vertically).”

26. Claims 23-30 are rejected under 35 U.S.C. 102(a) as being anticipated by Rushing (US 6,671,052 B1).

27. With respect to claim 23 Rushing discloses “[a] printing system for printing wide process widths, the system comprising: a frame support (26) defining a receiver transport path (26); a first set of overlapping toning stations (figure 5, two rightmost developing rollers), wherein the first set is positioned substantially perpendicular to the receiver transport path (26) and offset a distance (see figure 5); and a second set of overlapping toning stations (figure 5, two leftmost developing rollers), wherein the

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second set is positioned substantially perpendicular to the receiver transport path (26) and offset at least the distance (see figure 5), wherein the first and second sets of toning stations deposit toner on a same area of a receiver.”

28. With respect to claim 24 Rushing discloses “a first subsystem (21o, 21p) for measuring a respective amount of toner deposited by each toning station in the first set of overlapping toning stations, and for altering the respective amounts of toner deposited by each toning station (column 8, lines 5+; column 10, lines 1-10) in the first set of overlapping toning stations; and a second subsystem (21m, 21n) for measuring a respective amount of toner deposited by each toning station in the second set of overlapping toning stations, and for altering the respective amounts of toner deposited by each toning station (column 8, lines 5+; column 10, lines 1-10) in the second set of overlapping toning stations.”

29. With respect to claim 25 Rushing discloses “the first subsystem (21o, 21p) includes a densitometer (column 8, lines 5+; column 6, lines 25-40) or an electrometer or a powder layer thickness measuring device for measuring the respective amount of toner deposited by at least one of the toning stations in the first set of toning stations, and wherein the second subsystem (21m, 21n) includes a densitometer (column 8, lines 5+; column 6, lines 25-40) or an electrometer or a powder layer thickness measuring device for measuring the respective amount of toner deposited by at least one of the toning stations in the second set of toning stations.”

30. With respect to claim 26 Rushing discloses “each toning station in the first and second sets of toning stations includes a densitometer (21m-21p), an electrometer or a

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powder layer thickness measuring device for measuring the respective amount of toner deposited by the toning station. See figure 5.

31. With respect to claim 27 Rushing discloses "a first subsystem (21o, 21p) for measuring a respective amount of toner deposited by each toning station in the first set of overlapping toning stations, and for approximately equalizing the respective amounts of toner (column 13, lines 5+) deposited by each toning station in the first set of overlapping toning stations; and a second subsystem (21m, 21n) for measuring a respective amount of toner deposited by each toning station in the second set of overlapping toning stations, and for approximately equalizing the respective amounts of toner (column 13, lines 5+) deposited by each toning station in the second set of overlapping toning stations."

32. With respect to claim 30 Rushing discloses "the first set of overlapping toning stations deposits a different toning material than the second set of overlapping toning stations." Each toning station deposits a different color toner onto the belt. The difference in color accounts for the difference in toning material.

33. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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34. Claims 23, 28, 29 and 45-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakazato (US 6,483,997 B1).

35. With respect to claim 23 Nakazato discloses "a frame support (21) defining a receiver transport path (21); a first set of overlapping toning stations (23Y, 23C), wherein the first set is positioned substantially perpendicular to the receiver transport path (21) and offset a distance; and a second set of overlapping toning stations (23M, 23K), wherein the second set is positioned substantially perpendicular to the receiver transport path (21) and offset at least the distance, wherein the first and second sets of toning stations (23) deposit toner on a same area of a receiver."

36. With respect to claim 28 Nakazato discloses "a first subsystem (PS) for measuring a respective amount of toner deposited by each toning station (23) in the first set of overlapping toning stations (23Y, 23C), and for adjusting biases of the toning stations (column 2, lines 20-30) in the first set of overlapping toning stations (23Y, 23C) so as to approximately equalize the respective amounts of toner deposited by each toning station (23) in the first set of overlapping toning stations (23Y, 23C); and a second subsystem (RS) for measuring a respective amount of toner deposited by each toning station in the second set of overlapping toning stations (23M, 23K), and for adjusting biases (column 2, lines 20-30) of the toning stations (23) in the second set of overlapping toning stations (23M, 23K) so as to approximately equalize the respective amounts of toner deposited by each toning station in the second set of overlapping toning stations (23M, 23K)." See column 7, lines 10+.

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37. With respect to claim 29 Nakazato discloses “a measuring subsystem (PS) for measuring an amount of toner deposited by the first set of overlapping toning stations (23Y, 23C) relative to an amount of toner deposited by the second set of overlapping toning stations (23M, 23K); and a regulation subsystem (column 6+, “B. Density Adjustment by Image Forming Apparatus”) for adjusting the amount of toner deposited by the first set of overlapping toning stations (23Y, 23C) relative to the amount of toner deposited by the second set of overlapping toning stations (23M, 23K).”

38. With respect to claim 45 Nakazato discloses “positioning a first set of overlapping toning stations (23Y, 23C), wherein the first set (23Y, 23C) is positioned with a long axis of the respective toning roller substantially perpendicular to a receiver transport path (21) and offset a distance, for printing on a first area of a print medium; positioning a second set of overlapping toning stations (23M, 23K), wherein the first set (23Y, 23C) is positioned with a long axis of the respective toning roller substantially perpendicular to a receiver transport path (21) and offset at least a distance, to deposit a measured amount of toner relative to the first set of overlapping toning stations (23Y, 23C); measuring an amount of toner (column 5, lines 60-65) deposited by each toning station in the first set of overlapping toning stations (23Y, 23C); and adjusting a bias (column 2, lines 17-35) of at least one toning station in the first set of overlapping toning stations so as to approximately equalize respective amounts of toner deposited by each toning station in the first set of overlapping toning stations (23Y, 23C).”

39. With respect to claim 46 Nakazato discloses “a computer readable medium (column 6, lines 34-43).”

40. With respect to claim 47 Nakazato discloses "measuring an amount of toner (column 5, lines 60-65) deposited by each toning station (23) in the second set of overlapping toning stations (23M, 23K); and adjusting a bias (column 2, lines 17-35) of at least one toning station in the second set of toning stations (23M, 23K) so as to approximately equalize respective amounts of toner deposited by each toning station (23) in the first set of overlapping toning stations (23Y, 23C)." See column 7, lines 10-25).

41. With respect to claim 48 Nakazato discloses "adjusting the amount of toner deposited by the first set of toning applicators (23Y, 23C) relative to the amount of toner deposited by the second set of toning applicators (23M, 23K) comprises adjusting the amount of toner deposited (column 2, lines 20-30) by the second set of toning applicators (23M, 23K)."

42. With respect to claim 49 Nakazato discloses "controlling (column 2, lines 20-25) a portion of one or more toning stations (23) is wherein relative amounts of toner is deposited by some or all of the toning stations (23) with respect to each other."

Claim Rejections - 35 USC § 103

43. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

44. Claims 15, 16, 18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desie et al. in view of Thompson et al. (US 2002/0031376 A1).

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45. Desie et al., as described above, differ from the instant invention by failing to include a tapered skive.

46. Thompson et al. disclose a metering skive 66 provided with linear wings 67 at both ends to prevent physical damage that may occur at the ends of the development zone (paragraph 0037).

47. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Desie et al. to include wings on the skive, as disclosed by Thompson et al., in order to prevent physical damage at the ends of the development zone.

48. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desie et al. in view of Sirejacob (US 6,606,474 B2).

49. Desie et al., as described above, differ from the instant invention by failing to include a non-linear tapered skive.

50. Sirejacob discloses a doctor blade with an attached strip having a concave cross section constituting a non-linear taper (figure 7).

51. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Desie et al. to include a doctor blade with an attached strip having a concave cross section, as disclosed by Sirejacob, in order to improve blade efficiency (column 1, lines 30-35).

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52. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Desie et al. in view of Bock (US 4,261,289).

53. Desie et al., as described above, differ from the instant invention by failing to include a stepped skive that progressively increases toward a center.

54. Bock discloses a stepped doctor blade that has a greater gap between the blade and developing sleeve at the center than at the ends. See figure 2.

55. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Desie et al. to include a stepped doctor blade, as disclosed by Bock, in order to prevent toner from leaving the ends of the developing sleeve and contaminating the surrounding environment.

Conclusion

56. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Inoue et al. (US 6,212,348 B1) disclose a stepped skive in figures 7A-7C.
- b. Rushing et al. (US 5,546,165) disclose a densitometer for compensating overall process drift and nonuniformity.
- c. Hanson (US 6,493,517 B1) discloses a density detection system with means for adjusting a developing bias accordingly.
- d. Suzuki et al. (US 6,731,888 B2) disclose a density detection system with means for adjusting a developing bias accordingly.
- e. Yamanaka et al. (US 6,339,686 B2) disclose various metering blade configurations.

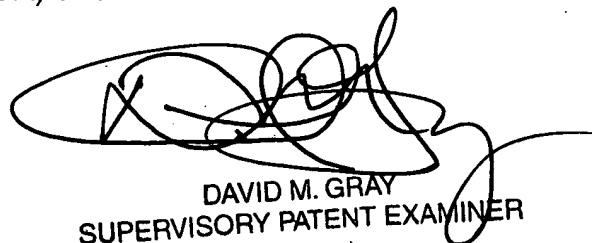
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth N. LaBombard whose telephone number is (571) 272-6430. The examiner can normally be reached on Monday - Friday, 7:30am - 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RNL
10/11/06



DAVID M. GRAY
SUPERVISORY PATENT EXAMINER